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LISTING OF THE CLAIMS

1   1. (Original) A method for detecting presence of a
2   user at a telecommunication terminal, comprising the steps of:
3   testing acoustic paths communicating audio
4   information from and back to the telecommunication terminal;
5   and
6   determining the presence of the user based on
7   changes in the acoustic paths.

1   2. (Original) The method of claim 1 wherein the step
2   of testing comprises the steps of forming a model of the
3   acoustic paths;
4   detecting modifications in the acoustic paths to update
5   the model of the acoustic paths; and
6   the step of determining comprises the step of using
7   the detected modifications to determine changes in the acoustic
8   paths.

1   3. (Original) The method of claim 2 wherein the step
2   of detecting comprises the steps of applying audio information
3   transmitted from the telecommunication terminal to the model of
4   the acoustic paths;

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5   receiving the transmitted audio information back by

6   the telecommunication terminal via the acoustic paths;

7   determining a difference between an output of the

8   model of acoustic paths from the received audio information;

9   and

10   calculating a correction to the model of the acoustic

11 paths using the difference and transmitted audio information.

1   4. (Original) The method of claim 1 wherein the audio

2   information is at one of within human hearing, above human

3   hearing and below human hearing.

1   5. (Original) The method of claim 1 wherein the step

2   of determining the presence comprises the steps of developing

3   the model of the acoustic paths with the user presence and not

4   presence at the telecommunication terminal; and

5   calculating a threshold of changes in the model of the

6   acoustic paths that represents the presence or non-presence of

7   the user at the telecommunication terminal.

1   6. (Canceled)

1   7. (Canceled)

1   8. (Canceled)

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1   9. (Original) An apparatus for detecting presence of a

2   user at a telecommunication terminal, comprising:

3   a transmitter for transmitting audio information;

4   a receiver for receiving the transmitted audio

5   information via acoustic paths;

6   a model of the acoustic paths for using the audio

7   information before transmission and for producing an audio

8   output;

9   a comparator for determining a difference between the

10   audio output and received audio information;

11   a modifier for iteratively generating modifications for

12   the model of the acoustic paths in responsive to the difference

13   and audio information before transmission; and

14   a controller responsive to the modifications for

15   detecting the presence or non-presence of the user at the

16   telecommunication terminal.

1   10. (Original) The apparatus of claim 9 wherein the

2   controller further configured for determining modifications when

3   the user is presence and when the user is not presence; and

4   the controller calculating a threshold from the

5   determined modifications indicating the presence or non-

6   presence of the user.

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1   11. (Original) The apparatus of claim 9 wherein the

2 audio information is at one of within human hearing, above

3 human hearing and below human hearing.

1   12. (Original) The apparatus of claim 11 wherein the

2 type of the audio information is controlled by the controller.

1   13. (Original) An apparatus for detecting presence of

2 a user at a telecommunication terminal, comprising:

3   an echo canceller for canceling echoes caused by

4 acoustic paths to audio information from and back to the echo

5 canceller; and

6   a controller responsive to changes in the echo

7 canceller for determining the presence and non-presence of the

8 user at the telecommunication terminal.

1   14. (Original) The apparatus of claim 13 wherein the

2 audio information is at one of within human hearing, above

3 human hearing and below human hearing.

1   15. (Original) The apparatus of claim 14 wherein the

2 type of the audio information is controlled by the controller.

1   16. (Original) The apparatus of claim 13 wherein the

2 echo canceller comprises a model of the acoustic paths;

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3   a modifier for generating modifications to the model
4   based on changes to the acoustic paths; and
5   the controller responsive to the generated
6   modifications for determining the presence or non-presence of
7   the user at the telecommunication terminal.

1   17. (Original) The apparatus of claim 16 wherein the
2   modifier responsive to a difference in an output of the model of
3   the acoustic paths to audio information before transmission
4   from the echo canceller and received audio information via the
5   acoustic paths for generating the modification based on the
6   difference and the audio information before transmission.

1   18. (Previously Amended) ~~An apparatus~~ A method
2   for determining presence of a user at a telecommunication
3   terminal, comprising:
4   ~~an echo detector for~~ detecting echoes caused by
5   acoustic paths to audio information from an echo detector and
6   back to the echo detector by the echo detector; and
7   ~~a controller responsive to changes in the echo~~
8   ~~detector for~~ determining in response to changes in the echo
9   detector by a controller the presence and non-presence of the
10 user at the telecommunication terminal.

1   19. (Previously Amended) The ~~apparatus~~ method of
2   claim 18 wherein the audio information is at one of within

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3 human hearing, above human hearing and below human

4 hearing.

1   20. (Previously Amended) The ~~apparatus~~ <u>method</u>

2 claim 19 wherein the type of the audio information is controlled

3 by the controller.

1   21. (Previously Amended) The ~~apparatus~~ <u>method</u> of

2 claim 18 wherein the echo detector comprises a model of the

3 acoustic paths;

4   ~~a modifier for~~ generating modifications to the model

5 based on changes to the acoustic paths <u>by a modifier</u>; and

6   ~~the controller responsive to the generated~~

7 ~~modifications for~~ <u>determining in response to the generated</u>

8 <u>modifications by the controller</u> the presence or non-presence of

9 the user at the telecommunication terminal.

1   22. (Previously Amended) The ~~apparatus~~ <u>method</u> of

2 claim 21 wherein the modifier responsive to a difference in an

3 output of the model of the acoustic paths to audio information

4 before transmission from the echo detector and received audio

5 information via the acoustic paths for generating the

6 modification based on the difference and the audio information

7 before transmission.

1   23. (Canceled)

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1   24. (Canceled)

1   25. (Canceled)

1   26. (Canceled)

1   27. (Canceled)

1   28. (Canceled)

1   29. (Canceled)

1   30. (Canceled)

1   31. (Canceled)

1   32. (Canceled)

1   33. (Canceled)

1   34. (Canceled)

1   35. (Canceled)

1   36. (Canceled)

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1   37. (Canceled)

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